

ABSTRACT OF THE DISCLOSURE

A method of forming a tri-gate fin field effect transistor includes forming an oxide layer over a silicon-on-insulator wafer comprising a silicon layer, and etching the silicon and oxide layers using a rectangular mask to form a mesa. The method further includes etching a portion of the mesa using a second mask to form a fin, forming a gate dielectric layer over the fin, and forming a tri-gate over the fin and the gate dielectric layer.